

(d) repeated reciprocal rotational movements of the forearm towards the upper arm to exercise the arm of the user.

PROPOSED AMENDED CLAIMS UNANNOTATED

5 54 A device for the exercise of the musculature of the upper arm, the device comprising: telescopically assembled co operating inner and outer tubular elements, each said tubular elements having end closure means at their outer ends; said outer tubular element including an inwardly projecting collar at its inward open end; said inner tubular element provided with an outwardly projecting collar at its inward open
10 end; said collars co operating to prevent the withdrawal of said inner tubular element from said outer tubular element when said tubular elements operate telescopically; said device moveable between a first state in which the telescopic elements are fully extended and a second state in which the telescopic elements are compressible against a bias inside the device to provide a resistance force to rotational movement about the
15 elbow of a forearm in a direction towards an upper arm of the same arm; wherein the device is of a length which allows engagement of one end with a hand of a user and the other end with an upper part of the same arm such that the user can exercise one arm by urging the hand against the upper arm without use of the other arm through an angle of approximately an angle of 90 degrees formed by the forearm and upper arm; wherein,
20 the bias is a compression spring which naturally biases the telescopic elements to their maximum relative extent; the maximum extended position, limited by contact between said collars; wherein, ends of said spring act against said closure means to provide the bias to maximum extent; and said end closure means of said outer tubular member comprising a removable end cap having a threaded sleeve section which mates with a
25 threaded portion at the end of said tubular element and which allows access to an interior passage in said device which receives the spring; wherein, the level of force resistance exerted by the device can be adjusted by substituting one biasing spring with another of a different compression resistance.

55 A device according to claim 54 wherein, said end closure means at the outward end of said outer tubular element is provided with a piston rod extending from said end closure means substantially the length of said outer tubular member.

5 56 A device according to claim 55 wherein said piston rod terminates in a piston adapted for sliding in said inner tubular member.

56 A device according to claim 56 wherein the piston provides sealing of said telescopic elements.

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57 A device according to claim 56 wherein the compression spring is installed between said end cap and the inwardly projecting collar of said inner tubular member.

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58 A device according to claim 57 wherein, said inner tubular member includes an air flow control valve positioned at said outward end of said inner tubular member.

59 A device according to claim 58 wherein, said air control valve is adapted to variably restrict the rate of air flow from said inner tubular member when said piston is driven towards said outward end of said tubular member.

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60 A device according to claim 59 wherein said end closure means are provided with resilient pads.

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61 A device according to claim 60 wherein one of said end closure means is provided with strapping to secure the device to the wrist of a user.

62 A device according to claim 61 wherein the overall length of said device when said outer and said inner tubular members are in a fully extended position is within in the range of 130 to 180 mm.

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63 A device according to claim 62 wherein said compression spring acts on a piston and piston rod coaxial with said tubular member so as to urge said piston and said piston rod into a maximum extended position.

5 64 A device according to claim 63 wherein an installed length of said compression spring is adjustable so as to vary a compressive force exerted by said spring on said piston and said piston rod; wherein said installed length is the length of said spring when said piston and said piston rod are in said maximum extended position.

10 65 A device according to claim 64 wherein said tubular member is provided with a shoulder yoke, to support said device at the shoulder of a user; and a wrist yoke at an outer end of said piston rod to provide support for said device at the wrist of said user.

15 66 A device according to claim 65 wherein said shoulder yoke is provided with adjustment means adapted to vary the distance between said shoulder yoke and said wrist yoke.

67 A device according to claim 66 wherein, said wrist yoke is provided with strapping means adapted to secure said yoke to the wrist of a user.

20 68 A device according to claim 67 wherein spring compression loadings required to compress the spring are in the range of 11 to 21 lb per inch of compression.

25 69 A device according to claim 68 wherein said end closure means of said inner tubular member is provided with a threaded portion adapted to mate with an external thread on the outside of said inner tubular element; said threaded portion providing adjustment means to enable variation of length between said end closure means.

30 70 A device according to claim 69 wherein said end closure means of said inner tubular member includes a threaded socket; said socket adapted for the attachment of a resilient support pad adapted to fit against the shoulder or hand of a user.

71 A method for the exercise of the musculature of the upper arm, using a device comprising : telescopically assembled co operating inner and outer tubular elements, each
5 said tubular elements having end closure means at their outer ends;
said outer tubular element including an inwardly projecting collar at its inward open end; said inner tubular element provided with an outwardly projecting collar at its inward open end; said collars co operating to prevent the withdrawal of said inner tubular element from said outer tubular element when said tubular elements operate telescopically; said
10 method comprising including the steps of; (a) exerting an axial load on the device to induce compression in the device; such that the device resists rotational movement of a forearm towards an upper arm of the same arm, said resistance force acting along the line between the shoulder and the wrist of a user;
(b) relaxing said axial load on said device so that said device restricts the angle at the
15 elbow of said user to an angle about or less than 90 degrees;
(c) adjusting said device so that the resistance force is within the capacity of the user to overcome by the rotational movement of the forearm towards the upper arm; said adjustment being effected by means of springs of varying spring rate or by means of varying the installed length of a compression spring;
20 (d) repeated reciprocal rotational movements of the forearm towards the upper arm to exercise the arm of the user.

REMARKS

25 1. Applicant thanks the examiner for the office action and hopes that this response will explain the distinction between the now claimed invention and the cited art.

2 Applicant has amended claim 27 - 53 as originally filed and has substituted new claims 54 - 71 which are amended from and based on the claims filed with the
30 originating application.